

CLAIM LISTING

1. (Currently Amended) A process for producing a non-aqueous sol-gel spin-on glass material comprising a hybrid glass/polymer material, by reacting an alkyl substituted trialkoxysilane or dialkyl substituted dialkoxysilane with a silane diol, wherein said alkyl group has from 1 to 8 carbon atoms, wherein the reaction of the alkyl substituted trialkoxysilane or dialkyl substituted dialkoxysilane silane with the silane diol is carried out in a non-aqueous medium in the presence of a catalyst, wherein the catalyst is selected from: a) a tin catalyst or b) a dibutyltin diluarate, titanium isopropoxide, acetic acid or trifluoroacetic acid catalyst.
2. (Original) The process of claim 1, wherein the silane diol is a diphenylsilanediol, a 1,3-Bis (3-hydroxypropyl) tetramethoxysilane, a 1,3-Bis (4-hydroxybutyl) tetramethylsilane, a fluorinated silane diol, or a mixture of one or more of these silane diols.
3. (Original) The process of claim 1, wherein the alkyl group is replaced with a methacryloxypropyl, acryloxypropyl, or epoxy moiety.

Claim 4 (Canceled)

5. (Original) The process of claim 1, wherein the trialkoxysilane or dialkoxysilane has 1 to 3 C₁ to C₈ alkyl, methacryloxypropyl and/or alkoxy groups on the same molecule.

Claim 6 (Canceled)

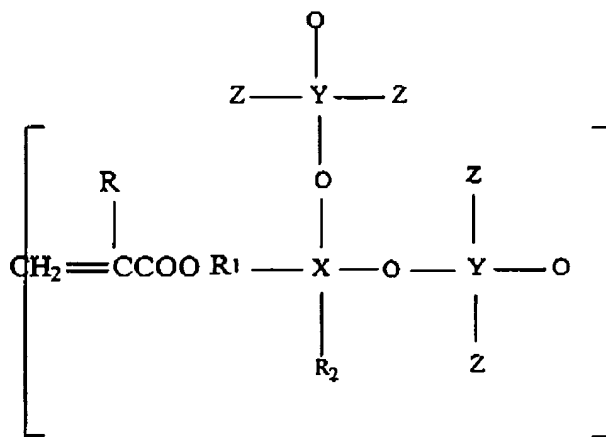
7. (Original) The process of claim 1, further comprising adding a phosphor dopant.
8. (Currently Amended) The process of claim 7, wherein the phosphor dopant comprises YAG base phosphor or moisture sensitive phosphor nano-particles or an organic material selected from organic dyes or metal complexes.

9. (Original) The process of claim 1, further comprising adding a UV light blocking material and/or an oxygen scavenger.
10. (Original) The process of claim 1, further comprising adding a light-scattering material.
11. (Original) The process of claim 1, further comprising adding a coupling agent.
12. (Original) The process of claim 11, wherein the coupling agent is a dibutoxyaluminoxetriethoxysilane, a mixture of zirconium isopropoxide and methacrylic acid, or another transition metal propoxide.

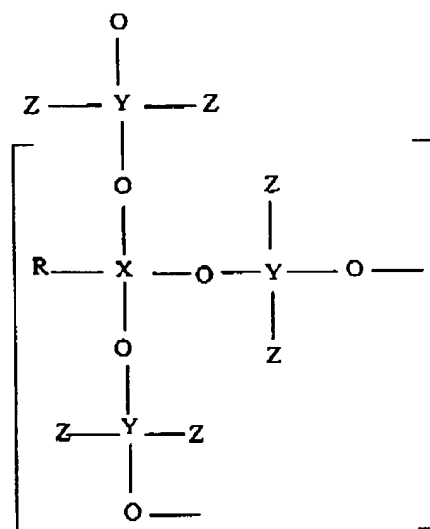
Claims 13-17 (Canceled)

18. (Currently Amended) A non-aqueous sol-gel spin-on glass material comprising a hybrid glass/polymer material containing a dopant, which comprises YAG base phosphor or moisture sensitive phosphor nano-particles, or an organic material selected from organic dyes or metal complexes, said sol-gel spin-on-glass material selected from the group having the following formulas:

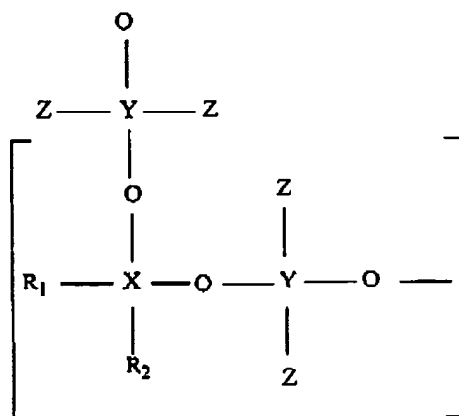
Formula I



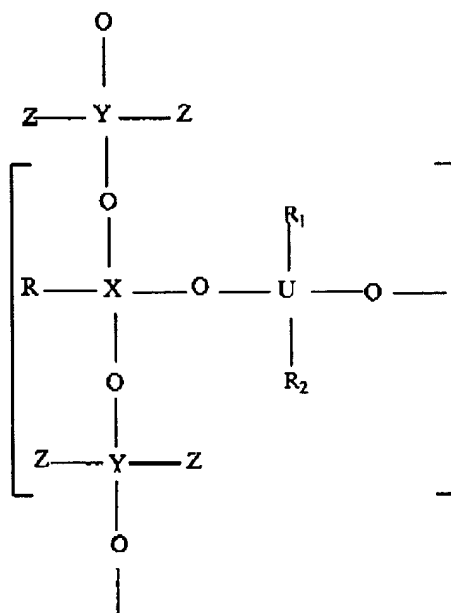
Where R = Hydrogen, C₁-C₈ Alkyl, Halogenated C₁-C₈ Alkyl or Glycidyoxyalkyl
 R₁ = Ethyl, Propyl, another C₁-C₈ Alkyl, Halogenated C₁-C₈ Alkyl, Phenyl or Halogenated Phenyl
 R₂ = Methyl, Ethyl or another C₁-C₈ Alkyl
 X, Y = Si, Ge, Ti or Sn
 Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Formula II

Where R = Alkyl (C₁-C₈), Phenyl, Substituted Phenyl
 X, Y = Si, Ti, Ge or Sn
 Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Formula III

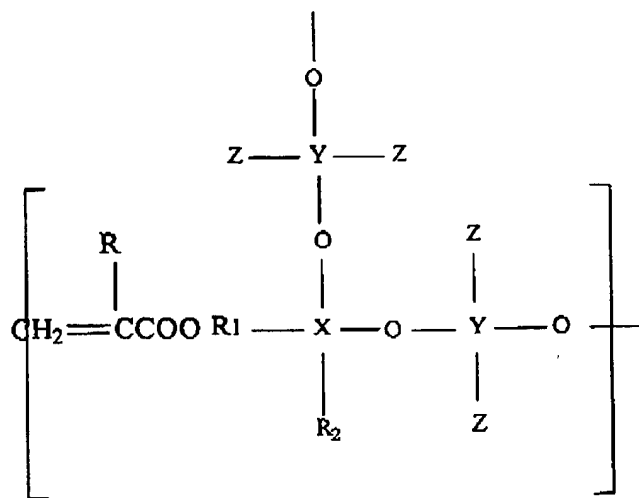
Where R_1 = Phenyl, Ethyl, Propyl, Trifluoropropyl
 R_2 = Methyl, Ethyl
 X, Y = Si, Ge, Ti or Sn
 Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Formula IV

Where R = Alkyl (C_1 - C_8), Phenyl, Substituted Phenyl
 R_1 = Alkyl, Phenyl
 R_2 = Alkyl, Phenyl
 X, U, Y = Si, Ge, Ti or Sn
 Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl.

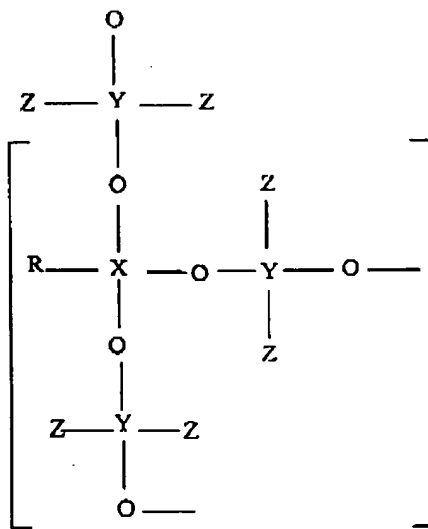
19. (Currently Amended) The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:

Formula I



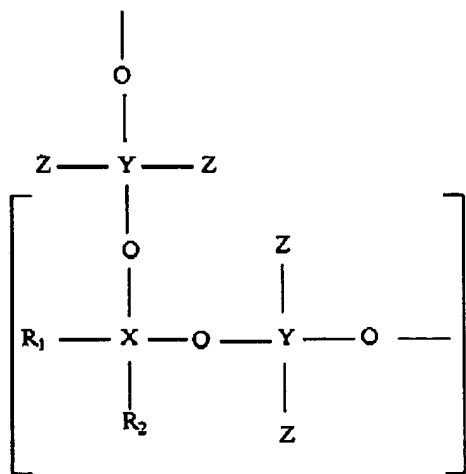
20. (Currently Amended) The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:

Formula II



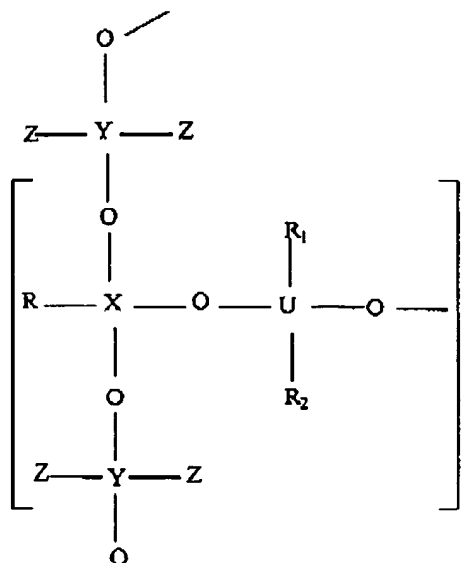
21. (Currently Amended) The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:

Formula III



22. (Currently Amended) The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:

Formula IV



Claims 23-25 (Canceled)

26. (Currently Amended) The non-aqueous sol-gel spin-on glass material of claim 18, further comprising a UV light blocking material and/or an oxygen scavenger.
27. (Currently Amended) The non-aqueous sol-gel spin-on glass material of claim 18, further comprising a light-scattering material.

Claims 28-33 (Canceled)

34. (New) The non-aqueous sol-gel spin-on glass material of claim 18, wherein the phosphor dopant comprises YAG base phosphor or moisture sensitive phosphor nano-particles.
35. (New) A process for producing the non-aqueous sol-gel spin-on glass material of claim 18, the process comprising reacting an alkyl substituted trialkoxysilane or dialkyl substituted dialkoxysilane with a silane diol, wherein said alkyl group has from 1 to 8 carbon atoms, wherein the reaction of the alkyl substituted trialkoxysilane or dialkyl substituted dialkoxysilane silane with the silane diol is carried out in a non-aqueous medium in the presence of a catalyst, the process further comprising adding to said sol-gel spin-on glass material a phosphor dopant, which comprises YAG base phosphor or moisture sensitive phosphor nano-particles or an organic material selected from organic dyes or metal complexes.
36. (New) The process of claim 35, wherein the phosphor dopant comprises YAG base phosphor or moisture sensitive phosphor nano-particles.